

colour, with a black head, which is very prominent and seems much too large for the size of the larva. After the first moult, which commenced on June 29th, the ground colour changed to a uniform light green, and they lost their black head, which became a little lighter in shade than the general colour, but was still very pronounced.

The second moult took place on July 10th, and this produced very little change except that six very faint white stripes appeared, three on each side, but were hardly perceptible.

The third and final moult took place on July 19th, and again there was very little change in the colour, but the stripes were now more distinct, the head, however, was still very prominent, giving the larva an unhealthy, starved appearance, but this gradually disappeared as they neared pupation.

When full fed the larva is 28mm. long, of a delicate green colour, a little lighter than grass. It is of the usual Satyrid form, tapering towards the anal extremity, with three nearly white stripes on each side; the two on the dorsal area are very close together, one near the spiracles and one midway between the two. The head is much lighter in shade, and though not now so prominent it still appears too large for the larva. It rests in a straight position on its food plant, and when annoyed falls and coils itself into a ring.

When full fed the larvae all attached themselves to the top of the cage and changed to light green pupae, almost the same shade as the larvae. They hung head downwards without any girth or band, and in no case did they attach themselves to the stems of grass. The first pupa appeared on August 3rd, and the last on August 23rd, en route for England, producing a total of 104. The larvae were quiet contented little creatures, bearing their confinement well, and took readily to any grass, but were fed chiefly on *Agropyrum repens*, and I do not think that I lost above four out of the whole brood. They fed both by night and day and no attempt was made to hide during daylight, in fact they seemed to enjoy the late afternoon sun.

I thought that I should get them out during August as a second brood, but not one has showed any signs of changing, and the whole lot are evidently going to hibernate as pupae, a somewhat unusual habit for a Satyrid.

It seems, therefore, that from 4,000 to 5,000 ft. *hiera* is only single brooded, and if a second brood does occur it may be only partial in favourable seasons, and probably at a much lower altitude.

I left Chamonix on June 29th, staying about a fortnight at Martigny, and going on to Bérival on July 15th. I can claim, therefore (except the fortnight at Martigny, which was not very hot, only on four days did the temperature rise above 70°), to have fed the larvae under quite natural conditions, Bérival 5,000 ft. being about the same altitude as where the parents were taken at Chamonix, and this may perhaps account for my success in rearing such a large number.

Description of Pupa of *Pararge hiera*.

By G. T. BETHUNE-BAKER, F.L.S., F.Z.S., F.E.S.

Mr. A. Simmons has asked me to describe the pupa of *Pararge hiera* which he found commonly at Chamonix. Since I wrote the description I have had three imagines emerge out of six chrysalids sent me.

One was shrivelled and I do not know the date of its emergence, but it was dead on December 30th last, on which day my wife told me there was a butterfly on the landing, which I found to be *P. hiera*. Then on the following day another emerged. Both these were quite perfect. The pupae were put in a gauze cage just by an east window, which was open all day. The other three pupae show no signs of maturity, but are the same clear green as they were on the day I received them. Description of pupa:—

Pupa, pale apple green, with very little yellow in it, wing cases slightly greyish with the green showing through. In shape it is thick and rather stumpy, with apparently no power of movement (I have seen no attempt at movement). It is very deeply rounded from the dorsum of the sixth abdominal segment to the cremasteral attachment, which is situated right on the venter; the wing cases extend to practically the fifth abdominal segment. To the naked eye the pupa looks smooth, but with a hand lens it is seen to be finely shagreened all over with fine irregular whitish elevations, the wing cases being broadly lined longitudinally as well. The antennae extend to the fifth abdominal segment, and the eyes are on the ventral surface. The thorax has a central longitudinal narrow projecting ridge, and it is sharply angled laterally near the middle, but rather nearer the collar at the juncture with the wing cases, and again at the front apex above the eyes, giving it a square form slightly angled forwards above the eyes.

The spiracles show as circular depressions with central slits, above the spiracular row is a dorso-lateral row of simple whitish tubercles. The length is 15½ mm., the greatest diameter of the abdomen is 5 mm. at the fourth abdominal segment, and the diameter of the thorax at the angled shoulders is 5⅔ mm.

NOTES ON COLLECTING, etc.

LATE APPEARANCE OF LEPIDOPTEROUS LARVAE IN 1922.—As a result of beating birches and beeches in the Box Hill district on October 10th, 1922, the following larvae were obtained:—*Hylophila prasinana* (1), *Drepana lacertinaria* (3), *D. falcataria* (1), *D. cultraria* (several), *Phalera bucephala* (several), *Dasychira pudibunda* (1), *Lophopteryx camelina* (several, many of them quite small), *Pheosia (Notodonta) dictaeoides* (several, mostly full fed), *N. dromedarius* (2, half grown), *Demas coryli* (1), *Trianaea (Acronicta) psi* (1), *Acronicta leporina* (2, full fed), *Amphidasis betularia* (several, in both early and late stages), *Tephrosia crepuscularia* (1), *Ephyra (Zonosoma) linearia* (3), *Cabera pusaria* (1), *Vidua corylata* (several), and some Tortrix larvae—not a bad result considering the date. The young larva of *Lophopteryx camelina* and the partly fed larva of *Notodonta dromedarius* did not arrive at maturity, possibly owing to the difficulty of obtaining their food plants in anything like suitable condition. All the larvae of *Amphidasis betularia*, however, fed up and pupated, the last but one going down on November 27th, and the final survivor on December 10th; surely a record date. The pupa resulting from the larva which went down on December 10th is small, but perfect, and it will be interesting to see whether the emergence of the imagines of this and some of the other *A. betularia* is retarded to any extent.—A. RUSSELL, Wilverley, Dale Road, Purley. January 8th, 1923.

ABERRATIONS OF RHOPALOCERA IN EAST TYRONE, 1922.—The following aberrations of common butterflies occurred in this district during the past summer, which was remarkable for the persistence of dull cloudy weather, accompanied with a slight but increased rainfall; May and September being the only months in which there was any continuous fine weather, and then only for a very short period.